Response to Arguments

Appellant's arguments with respect to the new grounds of rejection using the Chao reference have been considered but are not deemed persuasive. Regarding appellant's argument that the limitations of independent claim 59 have not been specifically addressed, note that the Chao reference clearly discloses the use of a processor-based system controller (see fig. 2B) which clearly would allow a stored signal to control the amount of AC power applied to an AC etchant plasma while a workpiece is being etched into a desired shape.

Appellant additionally argues that the limitations of the claims were not contemplated by Chao et al. as demonstrated by several steps included in Chao et al. that are not included in the claimed invention. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the anisotropic etch used to etch the trench and which produces sharp corners at the top and bottom of the trench, and the soft etch process, for example, in Chao et al.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Appellant argues that Chao et al. does not disclose a gradual increase or decrease in the power during etching but rather teaches that increasing or decreasing the source power increases or decreases the rounding at the bottom corners. However, the examiner respectfully submits that this does not take away from the fact that this

would have taught to one of ordinary skill in the art at the time the invention was made to gradually increase or decrease the source power during processing in order to increase or decrease the rounding at the bottom corners of the trench and therefore form a more or less rounded profile as shown in Chao et al. (for example, see figs. 4D-4E).

Appellant additionally argues that many of the dependent claims are also not disclosed by Chao et al., specifically, claims related to the gradual change of the power. However, concerning the specific time period to which the power remains at constant wattage and the amount the power is changed, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine through routine experimentation the optimum amount of time at which the power should remain constant and the optimum amount the power is changed, based upon a variety of factors including the desired rounded/shape profile of the trench and such limitations would not lend patentability to the instant application absent a showing of unexpected results.

Concerning appellant's argument with respect to the rejection under 35 USC 112, first paragraph, and the rejection under 35 USC 103 using the Bhardwaj et al. reference, the portion of the reply brief addressing these issues has been entered and considered. The application has been forwarded to the Board of Patent Appeals and Interferences for decision on the appeal.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luz L. Alejandro whose telephone number is 571-272-1430. The examiner can normally be reached on Monday to Thursday from 7:30 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Luz L. Alejandro/
Primary Examiner, Art Unit 1792